

TWO NEW SPECIES OF TAGETES (ASTERACEAE-
TAGETEAE) FROM MEXICO

B.L. Turner

Department of Botany, Univ. of Texas, Austin, TX 78713, U.S.A.

Preparation of a treatment of Tagetes for the Asteraceae of Mexico (Turner and Nesom, in prep.) has revealed the following novelties. I am grateful to Dr. G. Nesom for the Latin diagnoses. Doris Tischler provided the illustration.

TAGETES OAXACANA B. Turner, sp. nov., Fig. 1.

T. linifolia Seaton simile sed habitu fruticoso gracili usque ad 1 m alto et foliis 1-pinnatisectis divisionibus plerumque 15-27 filiformibus torulosis 10-20 mm longis et ca. 0.5 mm latis differt.

Slender glabrous shrubs to nearly 1 m high; stems terete, glabrous, striate, purplish; leaves opposite throughout, pinnately once-dissected, the divisions mostly 15-27, these filiform or nearly so, torulose, mostly 10-20 mm long, ca 0.5 mm wide, pustulate glands abundant along their length; heads radiate, ovoid in bud, borne solitary on peduncles 5-8 cm long; involucre broadly turbinate, 12-13 mm high, the bracts 5, their apices obtuse, glandular with linear pustules below, these becoming elliptical or round apically; ray florets 5, the ligules yellow, 12-15 mm long, 6-8 mm wide; disk florets 30-50, the corollas yellow, 8-9 mm long, the lobes linear, 1.5-2.0 mm long; disk achenes linear oblanceolate, 7.5-8.0 mm long, minutely hispidulous throughout to only moderately so, the pappus of 2-4, mostly united, erose scales, 3-4 mm long, and 1-3 much longer subulate awns 8-10 mm long, those of the ray with only short united scales ca 4 mm long.

A very distinct species, clearly related to T. linifolia but differing in numerous characters including habit, leaf shape, etc.

Tagetes oaxacana was distributed as T. cf. linifolia. The latter is a low divaricately branched shrublet which is relatively common on the drier western side of Mount Orizaba and Cofre de Perote in s. Puebla and adjacent Veracruz where it occurs among volcanic rocks and on ashy volcanic soils (Turner 15194 and 15248; TEX, XAL). The present species is described by its collectors as "slender shrubs up to nearly 1 m., but also blooming the first year".

TYPE: MEXICO. OAXACA: 25 mi SE of Tlaxiaco, ca 7200 m, "Brushy places on thin soil on sloping limestone rocks along the north base of the Sierra Madre del Sur", 25 Oct 1965, A. Cronquist & M. Sousa 10409 (holotype TEX; isotypes MEXU, NY, etc.).

TAGETES EPAPPOSA B. Turner, sp. nov.

T. pringlei S. Wats. simile sed acheniis parvioribus (5.0-6.0 mm longis) since pappo, capitulis plerumque 8-10 mm altis in pedicellis 2-4 cm longis, et flosculis disci 6-9 corollis plerumque 4-lobis 4-6 mm longis differt.

Slender erect aquatic annuals 30-45 cm high. Stems terete, striate, glabrous, the internodes as long as or longer than the leaves. Leaves opposite, linear-oblongate, connate, those at mid-stem 3-6 cm long, 3-4 mm wide, the surfaces glabrous, very weakly glandular-pustulate, the margins serrulate. Heads radiate, fusiform, 8-10 mm high, 3-4 mm thick, borne terminal or axillary on slender peduncles mostly 2-4 cm long. Involucre 8-9 mm high, the bracts 3-5 connate for 5/6 their length or more, red-striate, without or only a few round glandular-pustules present. Ray florets much-reduced, 1-2 per head, the ligules yellow, ca 1 mm long or less. Disk florets 6-8 per head, the corollas yellow, 4-6 mm long, the tube 2 times as long as the throat, the lobes mostly 3 or 4 in number, rarely 5. Anthers mostly 4, rarely 3. Style branches with short hispid acute appendages ca 0.7 mm long. Achenes linear-elliptical, 5-6 mm long, ca 1.5 mm wide, the pappus absent or nearly so.

TYPE: MEXICO: DURANGO: 9 mi N of Los Coyotes railroad station, ca 50 miles W of Durango, in shallow standing water in open pine-oak woods atop plateau in the Sierra Madre Occidental, 8100 ft, 29 Sep 1962, A. Cronquist 9562 (holotype TEX; isotypes NY, etc.).

Additional specimen examined: DURANGO: ca 5 mi NE of El Salto in low wet meadow along highway 40, ca 60 mi SW of Durango city, 8 Sep 1965, R. C. Jackson 7255 (TEX).

The holotype was distributed as Pectis connata Cronq., sp. nov., but the late D. Flyr annotated the sheet as "T. pringlei S. Wats. (Cronquist, pers. comm.)". Certainly it is close to the latter but differs in a number of features, the most obvious being the epappose achenes, the only truly epappose species of the genus known to date. The pappose Tagetes pringlei is a robust widespread species of the Central Plateau of Mexico extending from the type locality in Central Chihuahua to the State of Mexico. It is typically much-branched and the heads are usually clustered and sessile or only shortly pedunculate. Specimens from Jalisco are typically fewer-headed (much like T. epapposa) and shortly pedunculate, in habit somewhat between T. pringle and T. epapposa, but always pappose.

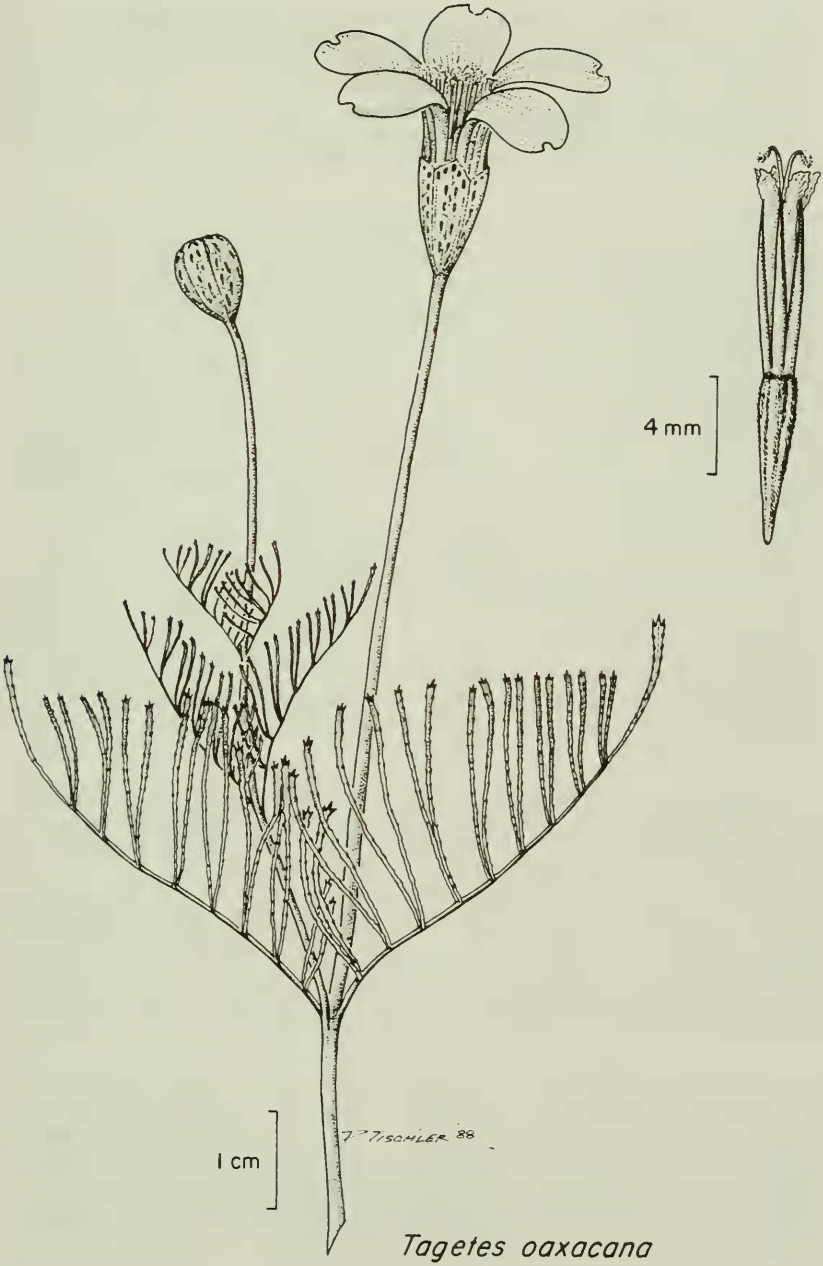


Fig.1. *T. oaxacana*, from holotype